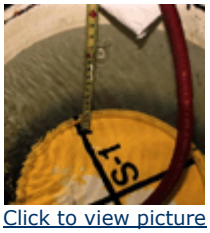
Structural Testing

Type B packages that transport radioactive materials must survive a sequence of full-scale (actual physical size) impact, puncture, fire, and immersion tests designed to replicate transportation accident conditions.

The Hypothetical Accident Conditions (six tests as defined in **10 CFR Part 71.73**) tests 1 through 4 (Drop, Crush, Puncture and Fire) are sequential, test 5 (Immersion) is performed on either a previously tested or untested package.

Free Drop Test	Crush Test	Puncture Test	Thermal Test	Immersion Test
 Click to view picture	 Click to view picture	 Click to view picture	 Click to view picture	 Click to view picture
Dropping a package from 30 feet onto an **unyielding target.** (the unyielding target forces all of the deformation to be in the package, none in the target). The speed on impact is 44 feet per second or 30 miles per hour.	Dropping a 1100 pound steel plate from 30 feet onto a package. This test is only required for packages weighing less than 1100 pounds. The speed on impact is 44 feet per second or 30 miles per hour.	Dropping a package from 40 inches onto a welded, 6 inch diameter, **steel spike.** The speed on impact is 14.6 feet per second or 10 miles per hour.	Placing a package 40 inches above a pool of burning fuel for 30 minutes at 800 degrees Celsius (1475 degrees Fahrenheit).	Placing a package under 50 feet of water for 8 hours. Fissile material packages are also immersed under 3 feet of water for 8 hours sequentially after tests 1 through

For more information, please go to the following web site:

http://www.sandia.gov/tp/tp.htm